

CLAIMS

I claim:

1. An adaptive support arm for reducing the severity of tremors from disabilities and handicaps to impairments, comprising:

a base support;

5 a first support member pivotal about a first axis passing through said first support member and repositionable with respect to said base support along said first axis having a means for variably setting a resistance to said first axis pivotal motion;

a second support member pivotal about a second axis displaced from said first axis and passing through said first and second support members having a means for variably setting a resistance to said second axis pivotal motion;

10 a longitudinally extensive armrest pivotal about a third axis displaced from said second axis and passing through said second and third support members having a means for variably setting a resistance to said third axis pivotal motion;

a pivotal member between said armrest and said second support member pivotal about a fourth axis angularly offset from said third axis having a means for variably setting a resistance to
15 said fourth axis pivotal motion; and

an elbow pad extendible from said armrest and pivotal about a fifth axis angularly offset from said armrest longitudinal axis.

2. The adaptive support arm of claim 1 wherein said means for variably setting a resistance to said first axis pivotal motion comprises a set screw with a force-responsive bushing adjacent to and engaging said first axis.

3. The adaptive support arm of claim 1 wherein said longitudinally extensive arm rest further comprises a forearm rest.
4. The adaptive support arm of claim 1 wherein said longitudinally extensive arm rest further comprises a hand cup.
5. The adaptive support arm of claim 1 wherein said fourth axis is perpendicular to said third axis.
6. The adaptive support arm of claim 5 wherein said first, second and third axes are parallel.
7. The adaptive support arm of claim 1 wherein said fifth axis is perpendicular to said armrest longitudinal axis.
8. The adaptive support arm of claim 1 further comprising a means for variably setting a resistance to said elbow pad pivotal motion about said fifth axis.
9. The adaptive support arm of claim 1 further comprising a pair of L-shaped rods spaced from each other and which are extendible parallel to said armrest longitudinal axis, said elbow pad independently pivotal about each of said L-shaped spaced rods, wherein longitudinal extension of a first one of said pair of L-shaped rods while a second one of said pair of L-shaped rods remains anchored effectuates pivotal motion of said elbow pad about said fifth

axis.

10. An adaptive three-axis arm support, comprising:

an anchor member affixing to a support; ✓

at least one arm restraint having a longitudinal axis and providing support for a user's arm against the pull of gravity and restraint of said user's arm;

a means for suspending and translating said arm restraint in any direction relative to said anchor member throughout and constrained within two axes which define a planar region of arm restraint positioning, and having means to effectively dampen muscle tremors during said suspending and translating;

at least one means to provide height adjustment of said arm restraint to offset said planar region relative to said anchor member; and

at least one means to pivot said arm restraint longitudinal axis into and out of said planar region.

11. The adaptive three-axis arm support of claim 10, wherein said means for suspending and translating said arm restraint further comprises:

a first support member pivotal about a first axis and having a means for variably setting a resistance to said first axis pivotal motion, said first axis perpendicular to said planar region of arm restraint positioning and passing through said first support member; and

a second support member pivotal about a second axis and having a means for variably setting a resistance to said second axis pivotal motion, said second axis displaced from and parallel to said first axis and passing through said first and second support members.

12. The adaptive three-axis arm support of claim 11, wherein said at least one means to provide height adjustment of said arm restraint further comprises:

a rod defining said first axis; and

a fastener retaining said first support member at a position with respect to said anchor member that is adjustable along said first axis when said fastener is released.

13. An adaptive feeding aid, comprising:

a base support;

a longitudinally extensive armrest;

an armrest support suspending and translating said armrest relative to said base support through and constrained within two axes which define a planar armrest translation region having a means for variably setting a resistance to said translating to adjust resistance to different needs of individual users;

an adjustable coupler between said base support and said armrest support adjusted to reposition said planar armrest translation region relative to said base support, said armrest support repositionable with respect to said base support along a first axis normal to said planar armrest translation region and held with respect thereto when supporting an arm;

a pivotal member between said armrest and said armrest support pivotal about an axis generally parallel to said planar armrest translation region and having a means for variably setting a resistance to said pivotal motion to adjust resistance to different needs of individual users.

14. The adaptive feeding aid of claim 13 wherein said longitudinally extensive arm rest further

comprises a forearm rest.

15. The adaptive feeding aid of claim 13 wherein said longitudinally extensive arm rest further comprises a hand cup.
16. The adaptive feeding aid of claim 13 further comprising an elbow pad extendible from said armrest and pivotal about an elbow pad pivot axis angularly offset from said armrest longitudinal axis.
17. The adaptive feeding aid of claim 13 further comprising a means for variably setting a resistance to said elbow pad pivotal motion.
18. The adaptive feeding aid of claim 13 further comprising a pair of L-shaped rods spaced from each other and which are extendible parallel to said armrest longitudinal axis, said elbow pad independently pivotal about each of said L-shaped spaced rods, wherein longitudinal extension of a first one of said pair of L-shaped rods while a second one of said pair of L-shaped rods effectuates pivotal motion of said elbow pad.
19. The adaptive feeding aid of claim 13 wherein said means for variably setting a resistance to said translating comprises at least one set screw with a force-responsive bushing adjacent to and engaging a rod normal to said planar armrest translation region.